

# Isolated Appendiceal Metastasis in Early Ovarian Carcinoma

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The appendix was identified as the only site of extrapelvic metastatic ovarian carcinoma at the time of primary surgical staging. Isolated appendiceal metastasis has not been previously reported in comprehensively staged early stage ovarian carcinoma. Routine appendectomy during surgical staging of ovarian carcinoma should be considered.

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**KEY WORDS:** ovarian carcinoma; appendix; surgery

## INTRODUCTION

The role of appendectomy in the primary surgical management of ovarian carcinoma is controversial [1–7]. Previous studies have shown a high incidence of appendiceal involvement in advanced stage III and IV disease [3,4]. Appendectomy at primary surgery may be useful in an advanced disease patient population if it contributes to tumor cytoreduction. Appendectomy also has been advocated by some for more comprehensive staging in early stages I and II disease [4]. To date, retrospective studies of early stage patients have failed to identify appendiceal metastases, or have noted microscopic appendiceal metastasis as part of a generalized microscopic dissemination [3–5]. Six patients with stages I and II ovarian carcinoma and appendiceal metastasis have been reported, but comprehensive staging with multiple peritoneal biopsies as previously described was not performed [6–8]. In this report, microscopic disease involving the appendix was identified as the only site of extrapelvic metastatic disease at the time of comprehensive staging.

## CASE REPORT

A 36-year-old white female gravida, 8 para 2 A6, without a significant prior medical or surgical history developed symptoms of increasing abdominal bloating, constipation, and weakness. Physical and pelvic examination demonstrated ascites and a 10 cm pelvic mass. There was no rectal compression and stool guaiac was negative. An ultrasound and subsequent abdominal/pelvic CT scan

demonstrated a 10 × 9.5 cm adnexal mass, ascites, and mesenteric thickening. A preoperative CA-125 assay was 815 U/ml. A chest X-ray was normal. The patient underwent an exploratory laparotomy where a complex ovarian mass was present involving both ovaries and adherent to the bladder peritoneum. Following aspiration of the ascites for cytologic evaluation, washings were taken of the pelvis and bilateral paracolic gutters for peritoneal cytologic evaluation. An abdominal hysterectomy, bilateral salpingo-oophorectomy, omentectomy, appendectomy, bilateral pelvic and paraaortic lymphadenectomy, and peritoneal biopsies of the right and left pelvic peritoneum, cul de sac peritoneum, bladder peritoneum, right and left paracolic gutter peritoneum, and right subdiaphragm were performed. Final pathology demonstrated a poorly differentiated mixed serous and endometrioid carcinoma of the ovary with involvement of the bladder peritoneum and microscopic involvement of the appendiceal serosa. The ascites and cytologic washings demonstrated no malignant cells. Postoperatively, she received six cycles of paclitaxel and cisplatin. Her CA-125 normalized after one cycle of chemotherapy, and she was found to have no residual disease at second-look laparotomy.

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## DISCUSSION

Comprehensive staging of early ovarian cancer has been associated with higher disease stage in 31% of patients [8]. In studies of appendectomy at staging operations for ovarian cancer, appendiceal involvement has been microscopic in up to 33% of cases [4]. In this report, the appendix was identified as the only site of extrapelvic metastatic disease at the time of comprehensive staging. Isolated appendiceal metastasis has not been previously reported in comprehensively staged early stage ovarian cancer. The poorly differentiated tumor histology noted in the current case has been associated with an increased frequency of appendiceal metastasis [4]. Appendiceal involvement in this case affected the patient's disease stage, prognosis, and treatment and led us to perform a second-look laparotomy [9–11]. In view of the low morbidity associated with this procedure and its potential impact, the addition of routine appendectomy during surgical staging of ovarian malignancies should be considered.

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